

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-8 are pending in this application. Claims 1-8 were rejected under 35 U.S.C. §103(a) as unpatentable over WO 01/77412 to Tojo et al. (herein "Tojo")¹ in view of U.S. patent 4,790,859 to Marumo et al. (herein "Marumo") and JP 2000-160390 to Fumio et al. (herein "Fumio"). Claims 1-8 were rejected under 35 U.S.C. §103(a) as unpatentable over Tojo in view of Marumo and further in view of U.S. patent 6,656,334 to Tseng et al. (herein "Tseng").

Addressing first the rejection of claims 1-8 under 35 U.S.C. §103(a) as unpatentable over Tojo in view of Marumo and further in view of Fumio, that rejection is traversed by the present response.

Each of independent claims 1 and 2 is amended by the present response to clarify in the box-shaped body the three compartments are "separated from each other by internal partition walls such that gases in the at least three compartments do not mix together". That subject is clear from the original specification, see for example page 6, lines 4-6, and also Figures 2 and 3 in the present specification showing the partitioning walls 105 and 106 forming three different compartments 101, 102, and 103.

The claimed features are believed to clearly distinguish over the applied art.

Tojo discloses an apparatus for generating fluorine gas. As recognized in the Office Action, Tojo does not disclose the first and second absorption units and the at least three compartments for housing the electrolyzer and the absorption units.² The outstanding rejection relies upon the disclosures in Fumio and Marumo to combine with Tojo to meet the claim limitations, specifically stating:

¹ In addressing the teachings in WO 01/77412 the Office Action relied on U.S. patent 6,818,105 B2, which is an English language version of WO 01/77412. The presently submitted remarks also rely on that U.S. patent 6,818,105 B2.

² Office Action of February 7, 2007, page 4, first full paragraph.

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the multi-compartment housing of JP '390 [Fumio] into the apparatus of Tojo '105 in view of Marumo to separately house the electrolyzer, the first absorption unit and the second absorption unit in order to avoid cross contamination (abstract, paragraph [0017]).³

In reply, applicants note none of the applied art to Fumio, Tojo, or Marumo disclose the claimed features of a box-shaped body being divided into *three compartments by internal partition walls* such that gases in the three compartments do not mix together.

Marumo does not disclose the claimed three separate components separated from each other by internal partition walls. The Office Action relies on Fumio to suggest the claimed three separate components. However, Fumio merely discloses placing an electrochemical plating device and a control system in *two separate rooms* to avoid contamination of the electrochemical plating device when the control system undergoes maintenance work. That disclosure in Fumio does not correspond to the claimed features in the following respects.

First, the claims are not directed to utilizing separate rooms as in Fumio. Instead, in the claims a *box-shaped body is divided by internal partition walls into at least three compartments*. Two separate rooms in Fumio does not correspond to such claimed features. Fumio simply does not disclose or suggest a single box-shaped body being separated into at least three compartments by internal partition walls.

In fact, none of the cited art discloses or suggests the claimed features of a single box-shaped body being separated by internal partition walls into at least three compartments.

As discussed in the paragraph bridging pages 2-3 in the present specification, one of the problems the claimed invention solves is providing a fluorine gas generator with which the gases used or generated can be prevented from mixing together as far as possible in case of gas leakage and can be treated safely without allowing them to escape to the outside and

³ Office Action of February 7, 2007, page 5, second paragraph.

with which maintenance, exchange, and other operations can be carried out with ease. The claimed invention accomplishes that objective by providing a single box-shaped body divided into three separate compartments by internal partition walls, thereby separating each of the electrolyzer, the first absorption unit, and the second absorption unit from each other. Thereby, any gas leaking into one compartment will not mix with gas that may leak into either of the other compartments. Therefore, a substantially single component gas can be treated in each compartment and improvements in safety and maintenance can be realized. Such improvements would not have been obvious or suggested from any of the applied art to one of ordinary skill in the art.

Tojo clearly does not disclose or suggest any structure of a single box-shaped body being separated into three compartments by internal partition walls. Marumo merely discloses separating gaseous mixtures from first and second gases having different chemical compositions. Those teachings in Marumo are in fact not even related to any disclosure in Tojo or to the claimed invention.

Fumio merely discloses utilizing two separate rooms such that a plating section is installed in a first room and the management department is installed in a second room. Clearly Fumio also does not disclose or suggest a single box-shaped body being separated into three compartments by internal partition walls.

Moreover, even if the teachings were combined as suggested in the Office Action, at most that would have suggested to one of ordinary skill in the art modifying Tojo to house the electrolyzer in a separate room from other units, as that is what Fumio teaches. No disclosure would have even addressed utilizing *three separate compartments* with a first absorption unit in one compartment, a second absorption unit in another compartment, and an electrolyzer in still another compartment. The art at most discloses an electrolyzer in a separate room from all other units, which would thereby result in only two different rooms.

In that case, such rooms would not be formed in a single box-shaped body and separated by internal partition walls.

In maintaining the outstanding rejection based on Tojo in view of Marumo and Fumio, the outstanding Office Action states such teachings would suggest providing separate housing for major components.⁴ However, what the Office Action has not even addressed is how the major components would be combined and where the cited art discloses such a feature. Fumio is clear in providing two separate rooms, one for a plating section and one for a management department. Fumio does not at all indicate every major component being separated into different compartments, or how one would determine what in fact is a “major component”. The art simply does not disclose or suggest the features reflected in the claims.

In such ways, no combination of teachings of Tojo, Marumo, or Fumio meets the limitations now recited in the claims. Thereby, independent claims 1 and 2, and the claims dependent therefrom, are believed to clearly distinguish over Tojo in view of Marumo and Fumio.

Addressing now the rejection of claims 1-8 under 35 U.S.C. §103(a) as unpatentable over Tojo in view of Marumo and further in view of Tseng, that rejection is also traversed by the present response.

Tseng is similar to Fumio in that Tseng merely discloses separating an electrolysis cell from other components. In that respect Tseng merely discloses utilizing two separate compartments, one for the electrolysis cell and one for all the other units. Tseng is thereby also deficient in that Tseng does not disclose or suggest a single box-shaped body utilizing internal partition walls to be separated into three compartments.

⁴ Office Action of February 7, 2007, page 9.

Moreover, Tseng is not at all clear in that the different compartments therein do not allow gases to mix together. Tseng does not at all appear concerned with the mixture of gases but only with separating an electrolysis cell for easy replacement.

Thereby, no combination of teachings of Fumio in view of Marumo and Tseng meets the features now clarified in the claims. Thereby, independent claims 1 and 2, and the claims dependent therefrom, also distinguish over that further grounds for rejection.

Moreover, dependent claims 3-8 are believed to even further distinguish over the applied art.

Regarding claim 3, while Tojo teaches an exhaust opening 19 to provide controlled atmosphere for the interior of the fluorine gas generator, there is no teaching or suggestion in the applied prior art to have provided a suction opening to each of the three compartments of the fluorine gas generator.

Regarding claim 4, while Tojo teaches a buffer tank 44 and a pressurizer 42, there is no teaching or suggestion in the applied prior art to have located these items in the claimed second compartment.

Regarding claim 5, while Tojo teaches that a heater 12 is used to provide proper heating of the electrolytic cell 2, there is no teaching or suggestion in the applied prior art to have used a water heating device for feeding warm water to the electrolytic cell 2 for heating the electrolytic cell 2.

Regarding claims 6-8, there is no teaching or suggestion in the applied prior art to have mounted either (1) the electrolyzer of Tojo on a transporting member; (2) the adsorption columns of Tojo's first adsorption unit on a transporting member; or (3) the adsorption columns of Tojo's second adsorption unit on a transporting member.

In view of the present response applicants respectfully submit the claims as written distinguish over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413-2220
(OSMMN 03/06)
SNS/rac

Surinder Sachar
Registration No. 34,423

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